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PTO/SB/21 (08-03)

Approved for use through 08/30/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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|   |                      |                        |             |
|---|----------------------|------------------------|-------------|
| <b>TRANSMITTAL FORM</b><br><br>(to be used for all correspondence after initial filing) | Application Number   | 10/710,403             |             |
|   | Filing Date          | 7/8/2004               |             |
|   | First Named Inventor | KUN-RONG CHANG         |             |
|   | Art Unit             |                        |             |
|   | Examiner Name        |                        |             |
| Total Number of Pages in This Submission  | 3                    | Attorney Docket Number | OTMP0082USA |

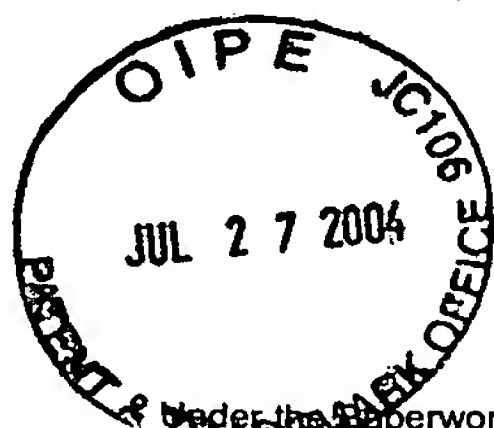
| ENCLOSURES (Check all that apply)   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> Fee Transmittal Form<br><input type="checkbox"/> Fee Attached<br><input type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input type="checkbox"/> Information Disclosure Statement<br><input checked="" type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Response to Missing Parts/Incomplete Application<br><input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation<br>Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s) _____ | <input type="checkbox"/> After Allowance communication to Technology Center (TC)<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input type="checkbox"/> Other Enclosure(s) (please identify below): |
| Remarks   |   |  |

| SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT |                               |
|--|-------------------------------|
| Firm or Individual name                    | Winston Hsu, Reg. No.: 41,526 |
| Signature                                  | <i>Winston Hsu</i>            |
| Date                                       | 7/26/2004                     |

| CERTIFICATE OF TRANSMISSION/MAILING   |  |      |  |
|---|--|------|--|
| I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below. |  |      |  |
| Typed or printed name   |  |      |  |
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PTO/SB/17 (10-03)  
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# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ ) 0.00

## Complete if Known

|                      |                |
|----------------------|----------------|
| Application Number   | 10/710,403     |
| Filing Date          | 7/8/2004       |
| First Named Inventor | KUN-RONG CHANG |
| Examiner Name        |                |
| Art Unit             |                |
| Attorney Docket No.  | OTMP0082USA    |

## METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number: 50-3105  
Deposit Account Name: North America Intellectual Property Corp.

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Credit any overpayments

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## FEE CALCULATION

### 1. BASIC FILING FEE

| Large Entity |          | Small Entity |          | Fee Description        | Fee Paid   |
|--------------|----------|--------------|----------|------------------------|------------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |                        |            |
| 1001         | 770      | 2001         | 385      | Utility filing fee     |            |
| 1002         | 340      | 2002         | 170      | Design filing fee      |            |
| 1003         | 530      | 2003         | 265      | Plant filing fee       |            |
| 1004         | 770      | 2004         | 385      | Reissue filing fee     |            |
| 1005         | 160      | 2005         | 80       | Provisional filing fee |            |
| SUBTOTAL (1) |          |              |          |                        | (\$ ) 0.00 |

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

|                    |  |         |  |   |  |   |  |
|--------------------|--|---------|--|---|--|---|--|
| Total Claims       |  | -20** = |  | X |  | = |  |
| Independent Claims |  | -3** =  |  | X |  | = |  |
| Multiple Dependent |  |         |  |   |  | = |  |

| Large Entity |          | Small Entity |          | Fee Description  | Fee Paid   |
|--------------|----------|--------------|----------|--|------------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |            |
| 1202         | 18       | 2202         | 9        | Claims in excess of 20                                     |            |
| 1201         | 86       | 2201         | 43       | Independent claims in excess of 3                          |            |
| 1203         | 290      | 2203         | 145      | Multiple dependent claim, if not paid                      |            |
| 1204         | 86       | 2204         | 43       | ** Reissue independent claims over original patent         |            |
| 1205         | 18       | 2205         | 9        | ** Reissue claims in excess of 20 and over original patent |            |
| SUBTOTAL (2) |          |              |          |  | (\$ ) 0.00 |

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

| Large Entity |          | Small Entity |          | Fee Description  | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |          |
| 1051         | 130      | 2051         | 65       | Surcharge - late filing fee or oath  |          |
| 1052         | 50       | 2052         | 25       | Surcharge - late provisional filing fee or cover sheet                     |          |
| 1053         | 130      | 1053         | 130      | Non-English specification  |          |
| 1812         | 2,520    | 1812         | 2,520    | For filing a request for ex parte reexamination                            |          |
| 1804         | 920*     | 1804         | 920*     | Requesting publication of SIR prior to Examiner action                     |          |
| 1805         | 1,840*   | 1805         | 1,840*   | Requesting publication of SIR after Examiner action                        |          |
| 1251         | 110      | 2251         | 55       | Extension for reply within first month                                     |          |
| 1252         | 420      | 2252         | 210      | Extension for reply within second month                                    |          |
| 1253         | 950      | 2253         | 475      | Extension for reply within third month                                     |          |
| 1254         | 1,480    | 2254         | 740      | Extension for reply within fourth month                                    |          |
| 1255         | 2,010    | 2255         | 1,005    | Extension for reply within fifth month                                     |          |
| 1401         | 330      | 2401         | 165      | Notice of Appeal   |          |
| 1402         | 330      | 2402         | 165      | Filing a brief in support of an appeal                                     |          |
| 1403         | 290      | 2403         | 145      | Request for oral hearing   |          |
| 1451         | 1,510    | 1451         | 1,510    | Petition to institute a public use proceeding                              |          |
| 1452         | 110      | 2452         | 55       | Petition to revive - unavoidable   |          |
| 1453         | 1,330    | 2453         | 665      | Petition to revive - unintentional   |          |
| 1501         | 1,330    | 2501         | 665      | Utility issue fee (or reissue)   |          |
| 1502         | 480      | 2502         | 240      | Design issue fee   |          |
| 1503         | 640      | 2503         | 320      | Plant issue fee  |          |
| 1460         | 130      | 1460         | 130      | Petitions to the Commissioner  |          |
| 1807         | 50       | 1807         | 50       | Processing fee under 37 CFR 1.17(q)  |          |
| 1806         | 180      | 1806         | 180      | Submission of Information Disclosure Stmt                                  |          |
| 8021         | 40       | 8021         | 40       | Recording each patent assignment per property (times number of properties) |          |
| 1809         | 770      | 2809         | 385      | Filing a submission after final rejection (37 CFR 1.129(a))                |          |
| 1810         | 770      | 2810         | 385      | For each additional invention to be examined (37 CFR 1.129(b))             |          |
| 1801         | 770      | 2801         | 385      | Request for Continued Examination (RCE)                                    |          |
| 1802         | 900      | 1802         | 900      | Request for expedited examination of a design application                  |          |

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ ) 0.00

## SUBMITTED BY

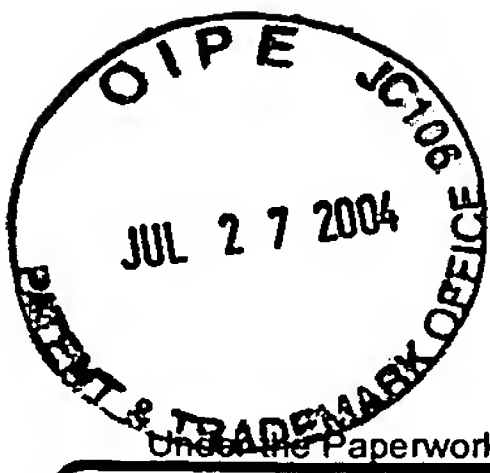
(Complete if applicable)

|                   |             |                                   |           |           |              |
|-------------------|-------------|-----------------------------------|-----------|-----------|--------------|
| Name (Print/Type) | Winston Hsu | Registration No. (Attorney/Agent) | 41,526    | Telephone | 886289237350 |
| Signature         |             | Date                              | 7/26/2004 |           |              |

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PTO/SB/02B (11-00)  
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## DECLARATION -- Supplemental Priority Data Sheet

Additional foreign applications:

| Prior Foreign Application<br>Number(s) | Country      | Foreign Filing Date<br>(MM/DD/YYYY) | Priority<br>Not Claimed  | Certified Copy Attached?            |                          |
|--|--------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
|  |              |                                     |                          | YES                                 | NO                       |
| 092212921                              | Taiwan R.O.C | 07/14/2003                          | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
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|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
|  |              |                                     | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

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中華民國經濟部智慧財產局

INTELLECTUAL PROPERTY OFFICE  
MINISTRY OF ECONOMIC AFFAIRS  
REPUBLIC OF CHINA

茲證明所附文件，係本局存檔中原申請案的副本，正確無訛，  
其申請資料如下：

This is to certify that annexed is a true copy from the records of this  
office of the application as originally filed which is identified hereunder:

申請日：西元 2003 年 07 月 14 日  
Application Date

申請案號：092212921  
Application No.

申請人：中強光電股份有限公司  
Applicant(s)

局長  
Director General

蔡練生

發文日期：西元 2004 年 3 月 15 日  
Issue Date

發文字號：09320244900  
Serial No.

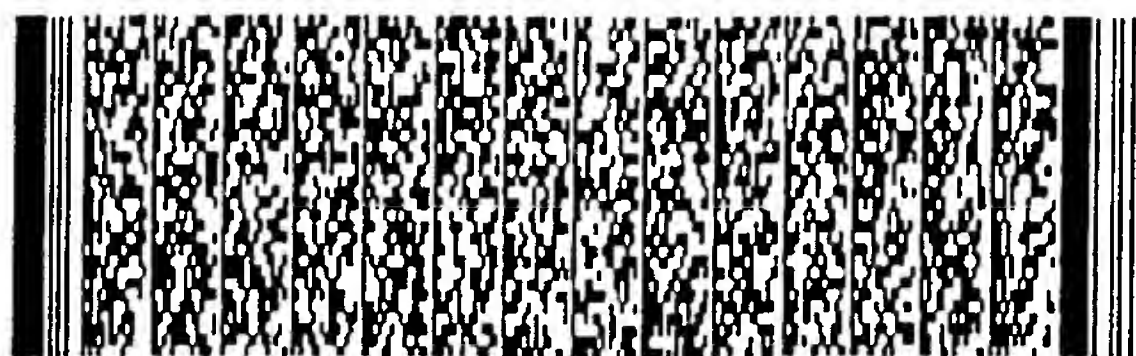


|       |       |
|-------|-------|
| 申請日期： | IPC分類 |
| 申請案號： |       |

(以上各欄由本局填註)

## 新型專利說明書

|                    |                       |   |
|--------------------|-----------------------|---|
| 一、<br>新型名稱         | 中 文                   | 背投影顯示裝置   |
|                    | 英 文                   | Rear projection display apparatus   |
| 二、<br>創作人<br>(共1人) | 姓 名<br>(中文)           | 1. 張根榮  |
|                    | 姓 名<br>(英文)           | 1. Kun-Rong Chang   |
|                    | 國 籍<br>(中英文)          | 1. 中華民國 TW  |
|                    | 住居所<br>(中 文)          | 1. 新竹科學工業園區新竹市力行路11號  |
|                    | 住居所<br>(英 文)          | 1. No. 11. Li Hsin Rd. Science-Based Industrial Park, Hsinchu, Taiwan, R.O.C. |
| 三、<br>申請人<br>(共1人) | 名稱或<br>姓 名<br>(中文)    | 1. 中強光電股份有限公司   |
|                    | 名稱或<br>姓 名<br>(英文)    | 1. Coretronic Corporation   |
|                    | 國 籍<br>(中英文)          | 1. 中華民國   |
|                    | 住居所<br>(營業所)<br>(中 文) | 1. 新竹科學工業園區新竹市力行路11號 (本地址與前向貴局申請者相同)  |
|                    | 住居所<br>(營業所)<br>(英 文) | 1. No. 11. Li Hsin Rd. Science-Based Industrial Park, Hsinchu, Taiwan, R.O.C. |
|                    | 代表人<br>(中文)           | 1. 張威儀  |
|                    | 代表人<br>(英文)           | 1. Wade Chang   |



#### 四、中文創作摘要 (創作名稱：背投影顯示裝置)

一種背投影顯示裝置包括一殼體、以及設於殼體內之光學引擎、多重曲率反射鏡、平面鏡及螢幕，其中多重曲率反射鏡表面依光路徑長短設有複數個不同曲率半徑之反射面，藉由光學引擎提供影像光束，經多重曲率反射鏡修正影像變形後將正確影像反射彎折至平面鏡，最後由平面鏡再次反射彎折而將影像呈現於螢幕上，以達到改善影像變形及薄化裝置厚度。

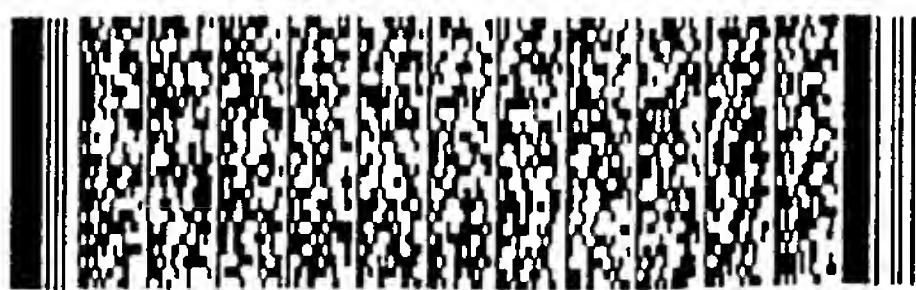
#### 英文創作摘要 (創作名稱：Rear projection display apparatus)

A rear projection display apparatus comprises a cabinet for storing an optical engine for providing a light beam, multi-curvature mirror, a mirror, and a screen. The multi-curvature mirror, for reflecting the light beam to the mirror, consists of plurality of reflecting surfaces with different curvature radius depending on the optical path from the optical engine to the screen, thus it can compensate the optical path so as to correcte the image distortion. The mirror is disposed parallel with the screen for

四、中文創作摘要 (創作名稱：背投影顯示裝置)

英文創作摘要 (創作名稱：Rear projection display apparatus)

reflecting the light beam to the screen. Thereby, the rear projection display apparatus can be improved the image distortion and reduced the depth of the display apparatus.



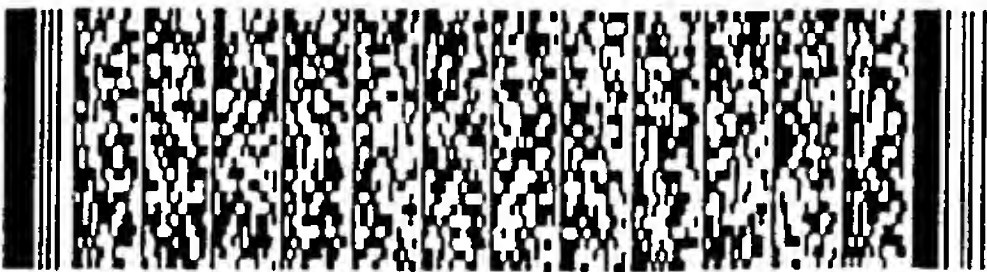
四、中文創作摘要 (創作名稱：背投影顯示裝置)

伍、(一)、本案代表圖為：第3圖

(二)、本案代表圖之元件代表符號簡單說明：

|      |     |         |     |
|------|-----|---------|-----|
| 顯示裝置 | 3 0 | 殼體      | 3 1 |
| 光學引擎 | 3 2 | 多重曲率反射鏡 | 3 3 |
| 平面鏡  | 3 4 | 螢幕      | 3 5 |

英文創作摘要 (創作名稱：Rear projection display apparatus)





一、本案已向

國家(地區)申請專利

申請日期

案號

主張專利法第一百零五條準用  
第二十四條第一項優先權

無

二、☐主張專利法第一百零五條準用第二十五條之一第一項優先權：

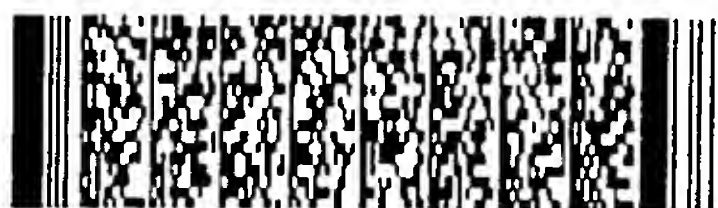
申請案號：

無

日期：

三、主張本案係符合專利法第九十八條第一項☐第一款但書或☐第二款但書規定之期間

日期：



## 五、創作說明 (1)

### 【 新 型 所 屬 之 技 術 領 域 】

本創作係有關背投影顯示裝置，尤其係指一種利用多重曲率反射鏡來薄化裝置厚度之背投影顯示裝置。

### 【 先 前 技 術 】

一般背投影顯示裝置係由光學引擎產生一影像光束經反射鏡曲折光路徑後，將影像投射於螢幕上，藉由反射鏡將光路彎向螢幕，以縮小顯示裝置厚度。

請參閱第 1 圖所示，習知背投影顯示裝置 10 係採用平面鏡來反射光路徑，其中設一大平面鏡 11 於螢幕 12 背面，一小平面鏡 13 於光學引擎 14 出口端前，以使由光學引擎 14 投射出之影像可經小平面鏡 13、大平面鏡反射 11 後投射至螢幕 12 上，然小平面鏡 13 需向上傾斜一角度設置，使影像可投射大平面鏡 11，而大平面鏡 11 亦需傾斜設置以補償不等長光路徑，但傾斜設置平面鏡會使得系統厚度增大，致使薄化系統厚度之效果有限。

請參閱第 2 圖所示，係日本特開平 2001-51347 專利所揭示之背投影顯示裝置 20，將大平面鏡 25 平行螢幕 26 設置，再利用複數個曲面鏡（即第一凸曲面鏡 21、第二凹曲面鏡 22 及第三凸曲面鏡 23）設於光學引擎 24 與大平面鏡 25 間，以增加光路徑彎折數目使系統厚度得以縮減且畫面得以展開，再藉適當調整曲面鏡 21、22、23 角度位置，以補償光路徑不等長造成影像變形，然隨著曲面鏡數目增加，其本

## 五、創作說明 (2)

身之精密度及相對曲面鏡間之對正精密度需更為緊密配置誤差，以避免引起偏離、影像變形等問題而降低影像品質，但此將造成曲面鏡之製造成本提高，且各曲面鏡間對正調整時間及複雜度增加。

### 【新型內容】

本創作之一目的，係提供一種背投影顯示裝置，利用於多重曲率反射鏡上設置不同曲率半徑之反射面以補償光路徑不等長，達到的修正影像變形。

本創作之另一目的，係提供一種背投影顯示裝置，藉由單一多重曲率反射鏡取代複數個曲面鏡之功能，使減少元件數目並簡化調整對準工作。

本創作之又一目的，係提供一種背投影顯示裝置，藉一多重曲率反射鏡及平行螢幕設置之平面鏡，來彎折光路徑，以達到薄化裝置厚度及增大螢幕面積。

為達上述目的，本創作之背投影顯示裝置包括一殼體、以及設於殼體內之光學引擎、多重曲率反射鏡、平面鏡及螢幕，其中多重曲率反射鏡表面依光路經長短設有複數個不同曲率半徑之反射面，藉由光學引擎提供影像光束，經多重曲率反射鏡修正影像變形後將光路徑反射彎折至平面鏡，最後由平面鏡再次反射彎折而將影像呈現於螢幕上，以達到薄化裝置厚度及改善影像變形。

### 【實施方式】

有關本創作為達到上述目的，所採用之技術手段及其餘功效，茲舉一較佳實施例，並配合圖式加以說明如

## 五、創作說明 (3)

下：

請參閱第3圖所示，係本創作背投影顯示裝置30包括一殼體31、以及設於殼體31內之光學引擎32、多重曲率反射鏡33、平面鏡34及一螢幕35；其中光學引擎32提供影像光束321並投射於多重曲率反射鏡33上；多重曲率反射鏡33係設置於影像光束321光路徑上並朝向平面鏡34傾斜一角度，以將影像光束321反射後投射至平面鏡34上，請參閱第4圖所示，且多重曲率反射鏡33係由多個不同曲率半徑之反射面（如近似凹反射面332、近似平反射面333、近似凸反射面334）形成，而曲率半徑大小係取決於光學引擎32至螢幕35之光路徑長短，且曲率半徑大小與光路徑距離成反比，本實施例中利用將反射鏡33表面分隔成多個不同區域（如332、333及334），而分割區域之大小密度可依光路徑變化幅度而訂，再利用光路徑推算出每一區域之曲率半徑，例如：光路徑較長者（如：321A），則於光路徑通過之多重曲率反射鏡33表面設置曲率半徑為負之凹反射面332，使影像光束投射於凹反射面332時，影像會依曲面內彎曲而將影像縮小，使影像縮放倍率縮小；而光路徑較短時（如：321B），則於光路徑通過之多重曲率反射鏡33表面設置曲率半徑為正之凸反射面334，使影像光束投射於凸反射面334時，影像會依曲面向外彎曲而將影像放大，使影像縮放



#### 五、創作說明 (4)

倍率增大；因此，藉由多重曲率反射鏡 3 3 來補償光路徑不等長，使影像放大倍率相同，而修正影像變形問題；而平面鏡 3 4 係平行螢幕 3 5 設置於螢幕 3 5 背面，以將多重曲率反射鏡 3 3 反射之影像光束 3 3 1 反射至螢幕 3 5 上。

藉由光學引擎 3 2 提供影像光束 3 2 1，經多重曲率反射鏡 3 3 與平面鏡 3 4 反射以彎折光路徑後，將影像反射至呈現於螢幕 3 5 上，以達到薄化裝置厚度。且由於平面鏡 3 4 平行螢幕 3 5 擺置，而藉由多重曲率反射鏡 3 3 表面的曲率半徑變化來補償光路徑不等長，因此可使螢幕 3 5 與平面鏡 3 4 之距離縮短，且由於曲率半徑的變化可使影像縮放，因此可透過適當曲率半徑配置使影像展開，而增大螢幕尺寸。

另由於投射於多重曲率反射鏡 3 3 之影像，利用多重曲率反射鏡 3 3 上不同曲率半徑之反射面將影像反射至平面鏡 3 4，而使影像進行適當的縮放至放大倍率相同，以補償光路徑不等長產生之影像變形；請參閱第 5 圖所示，係根據本創作之背投影顯示裝置，利用光學設計軟體（該軟體為 Zemax）進行模擬所得結果，其中該影像光束經多重曲率反射鏡 3 3 補償修正後，使得影像可近似螢幕形狀投射於螢幕 3 5 上，因此，可證實本創作可達到修正影像變形目的。

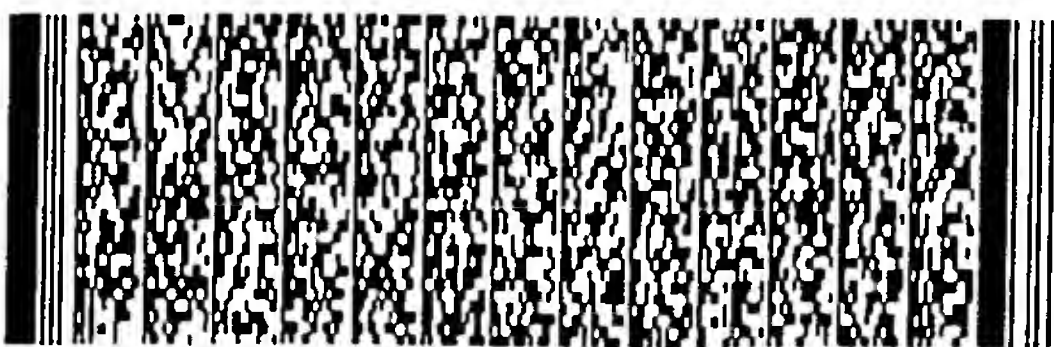
而本創作的利用單一多重曲率反射鏡 3 3 透過其表面上曲率半徑的變化來取代習知採用複數個曲面鏡之功效



##### 五、創作說明 (5)

，使得可簡少元件數目，且不需藉由調整曲面鏡間相對位置角度達到修正影像變形，因此，可有效降低調整複雜度及時間，且降低顯示裝置成本及簡化調整對準工作。

以上所述，僅用以方便說明本創作之較佳實施例，本創作之範圍不限於該等較佳實施例，凡依本創作所做的任何變更，於不脫離本創作之精神下，皆屬本創作申請專利範圍。



圖式簡單說明

【圖式簡要說明】

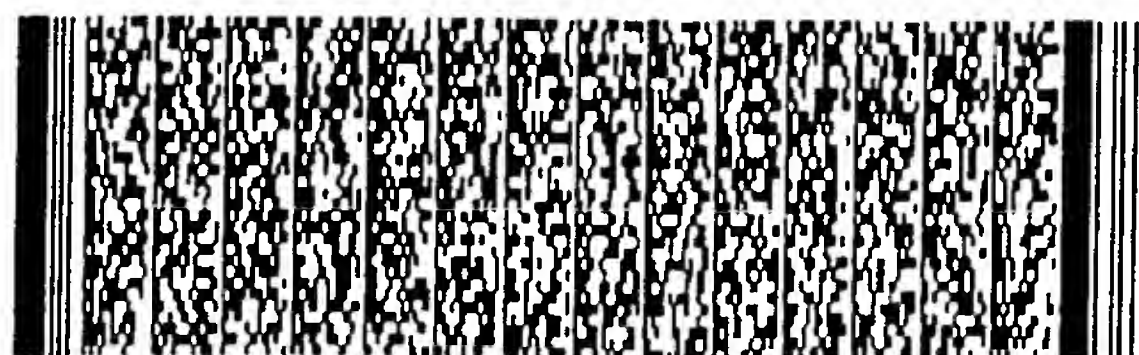
- 第 1 圖 係習知背投影顯示裝置之示意圖。
- 第 2 圖 係習知另一背投影顯示裝置之示意圖。
- 第 3 圖 係本創作背投影顯示裝置之示意圖。
- 第 4 圖 係本創作背投影顯示裝置之多重曲率反射鏡之立體圖。
- 第 5 圖 係本創作背投影顯示裝置之後視圖。

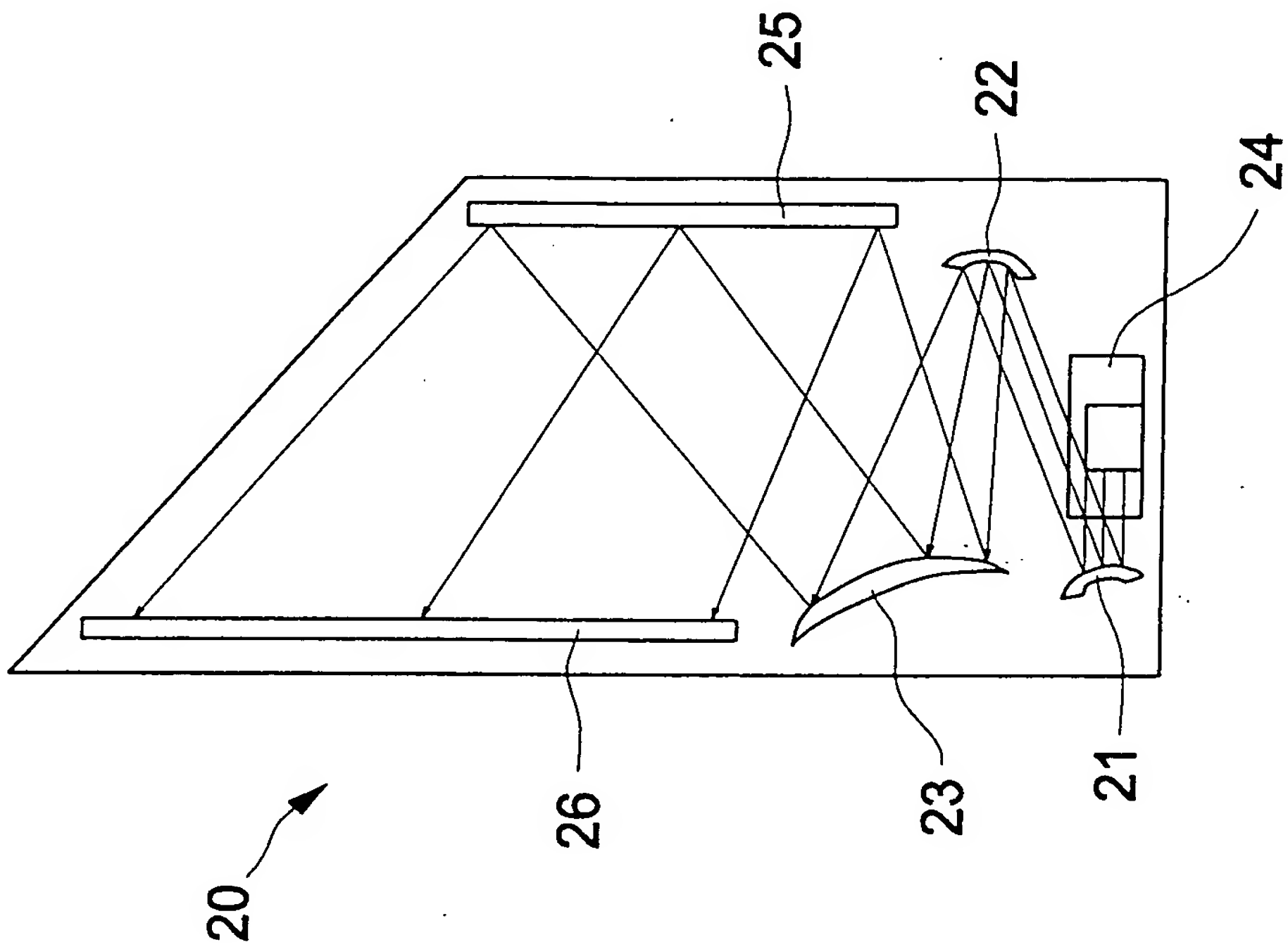
【圖號簡要說明】

|         |   |   |                   |
|---------|---|---|-------------------|
| 顯示裝置    | 3 | 0 |                   |
| 殼體      | 3 | 1 |                   |
| 光學引擎    | 3 | 2 |                   |
| 影像光束    | 3 | 2 | 1、3 2 1 A、3 2 1 B |
| 多重曲率反射鏡 | 3 | 3 |                   |
| 影像光束    | 3 | 3 | 1                 |
| 凹反射面    | 3 | 3 | 2                 |
| 平反射面    | 3 | 3 | 3                 |
| 凸反射面    | 3 | 3 | 4                 |
| 平面鏡     | 3 | 4 |                   |
| 螢幕      | 3 | 5 |                   |

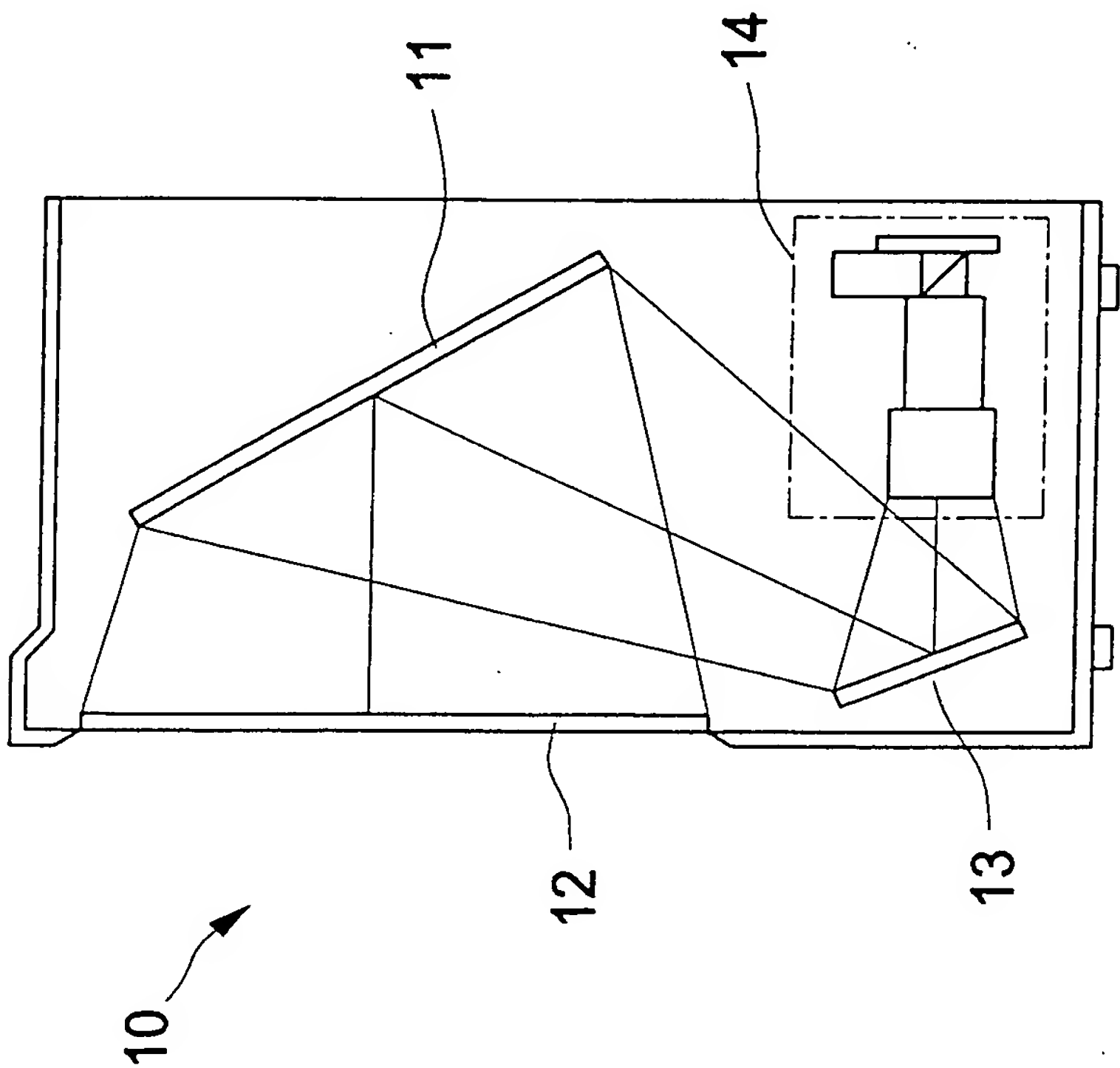
六、申請專利範圍

- 1、一種背投影顯示裝置，其具有一殼體，該殼體內包括：  
一光學引擎，係用以提供一影像光束；  
一多重曲率反射鏡，係設於該影像光束之光路徑上，且其由複數個不同曲率半徑之反射面所組成；以及  
一螢幕，係設於該多重曲率反射鏡反射影像光束之路徑上，以供顯示影像。
- 2、如申請專利範圍第1項所述之背投影顯示裝置，其中該反射面之曲率半徑係依該光路徑而設。
- 3、如申請專利範圍第1項所述之背投影顯示裝置，其中該螢幕背面設有一平面鏡，且該平面鏡位於該多重曲率反射鏡反射影像光束之路徑上。
- 4、如申請專利範圍第3項所述之背投影顯示裝置，其中該平面鏡係平行於該螢幕設置。

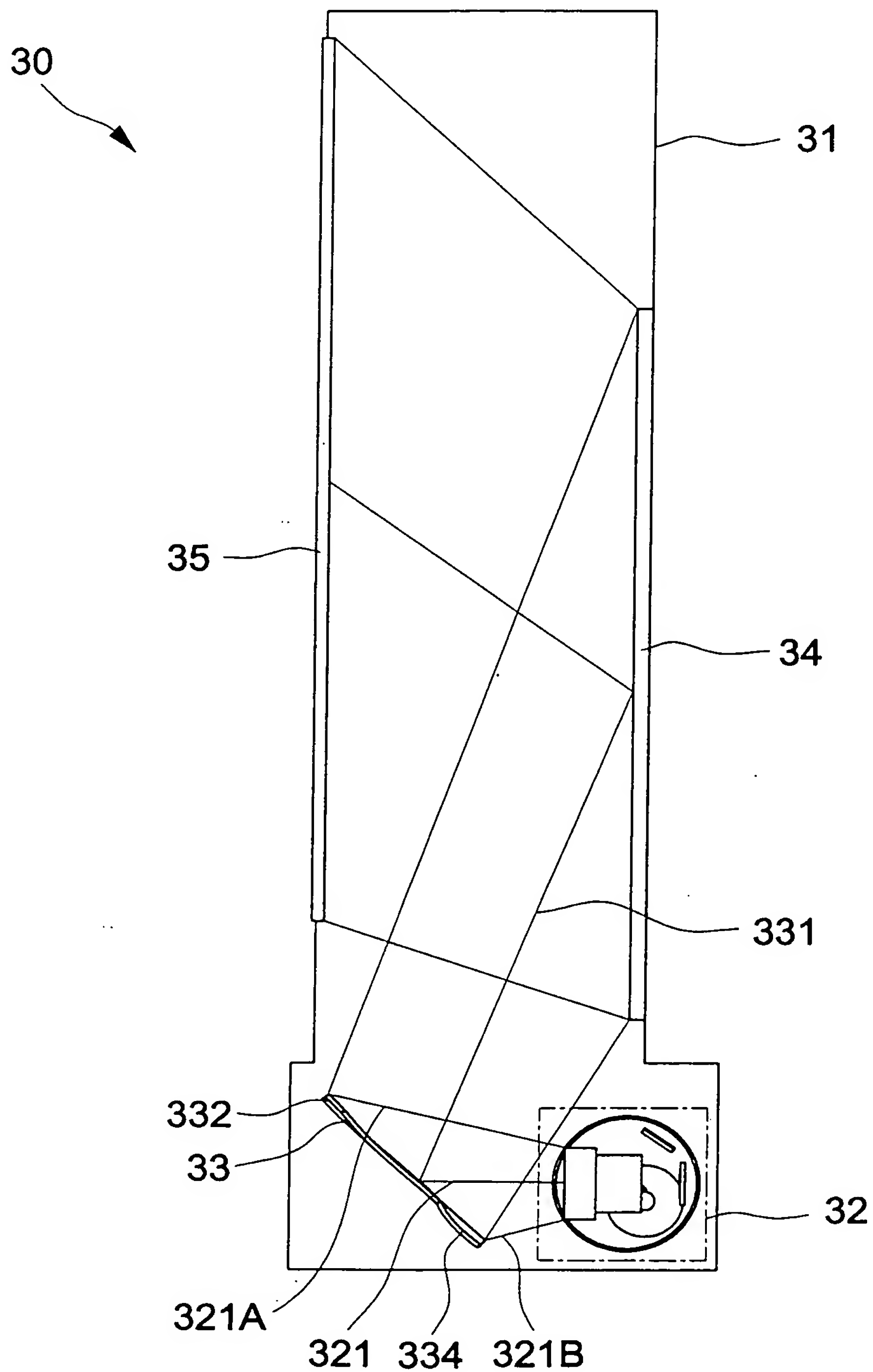




第 2 圖



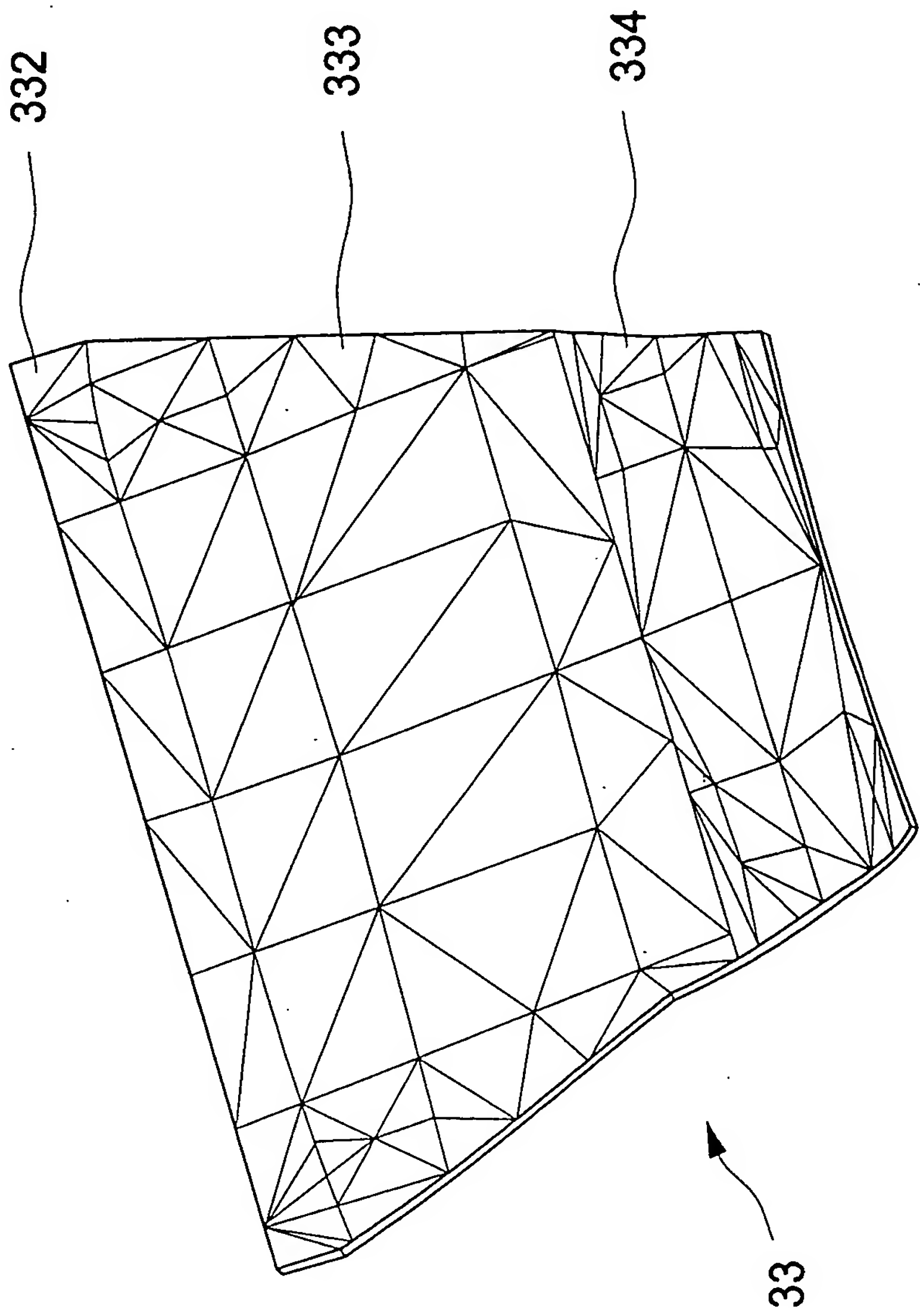
第 1 圖



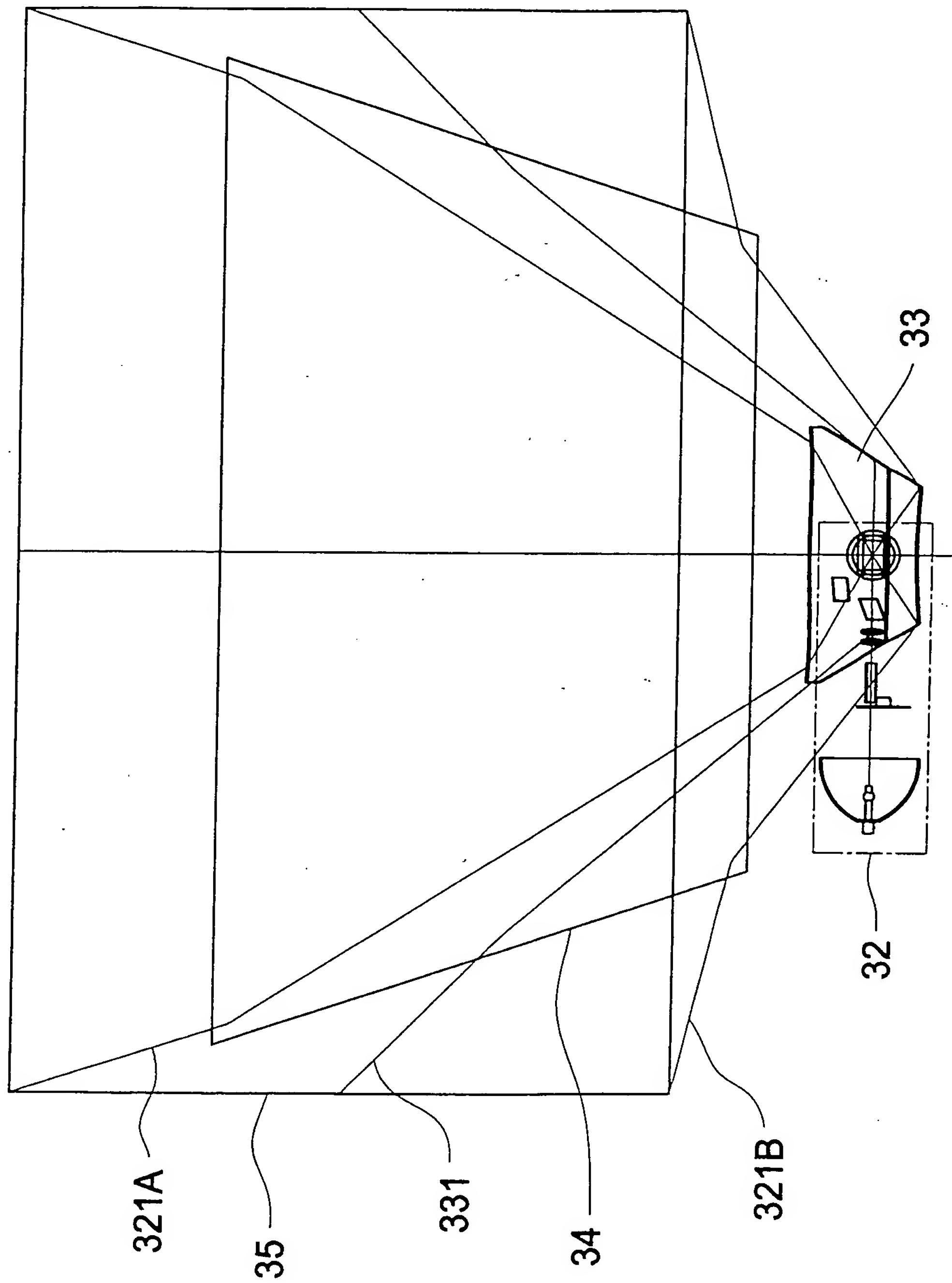
第 3 圖



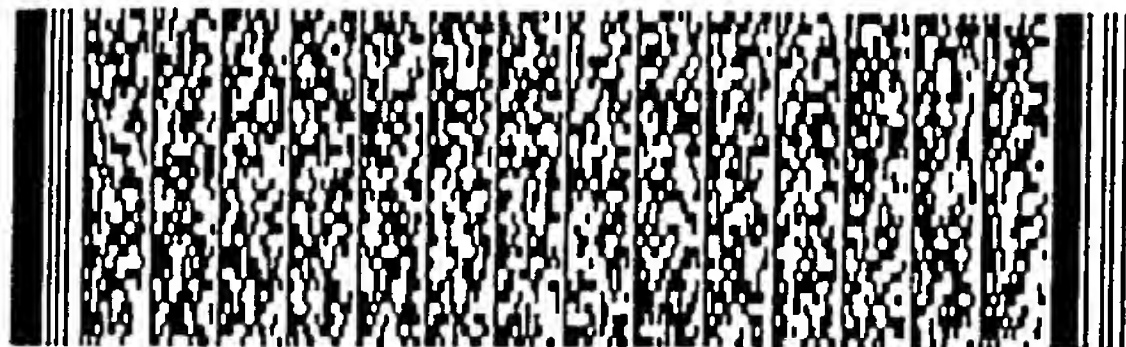
第 4 圖



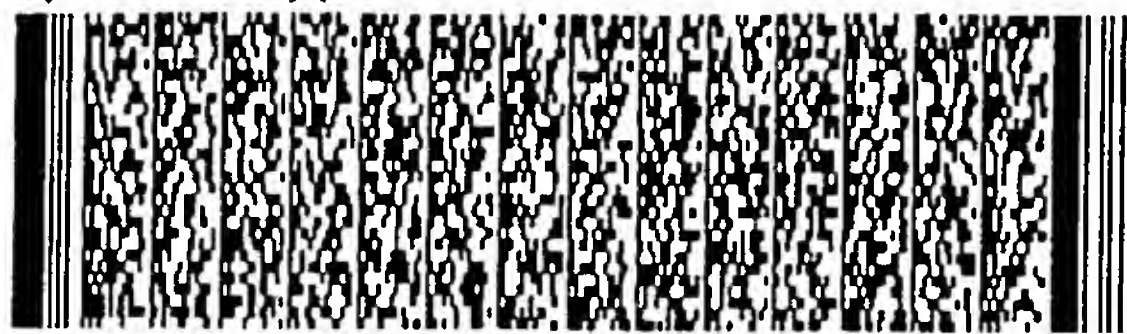
第 5 圖



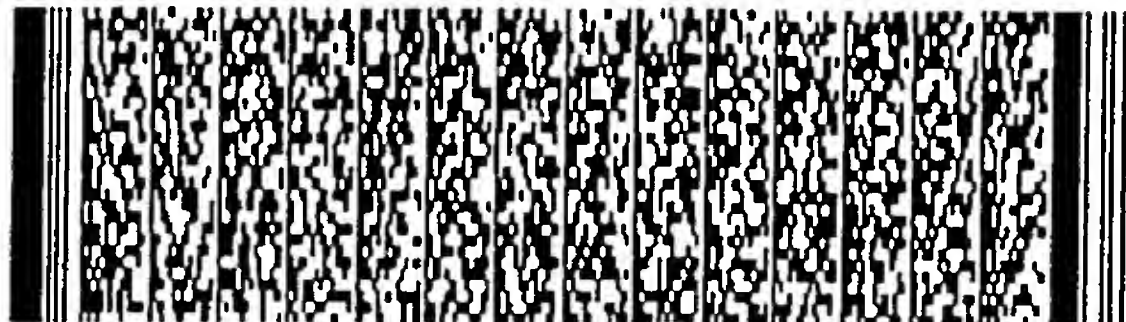
第 1/12 頁



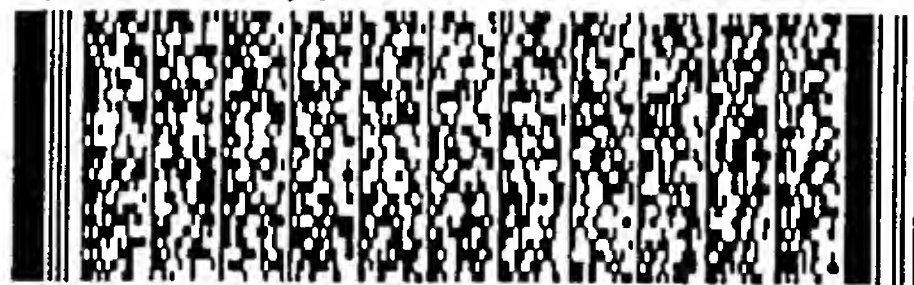
第 2/12 頁



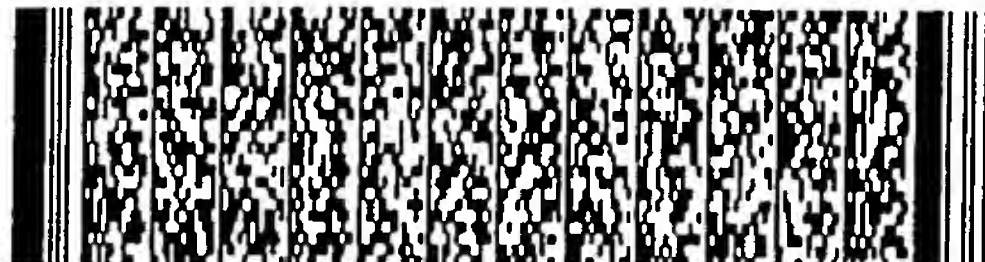
第 2/12 頁



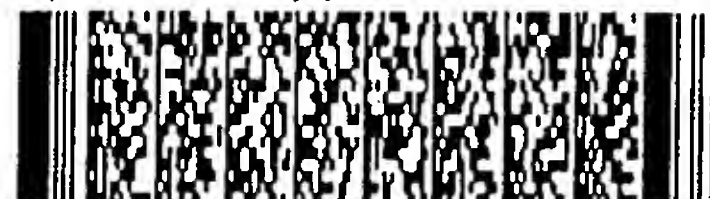
第 3/12 頁



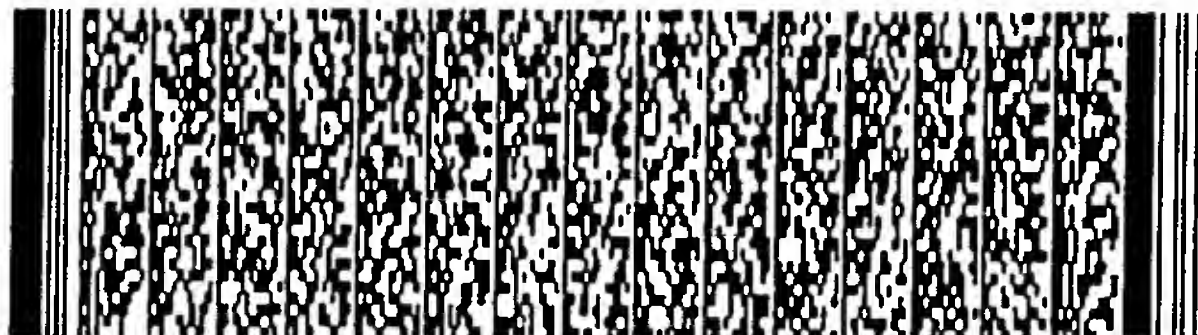
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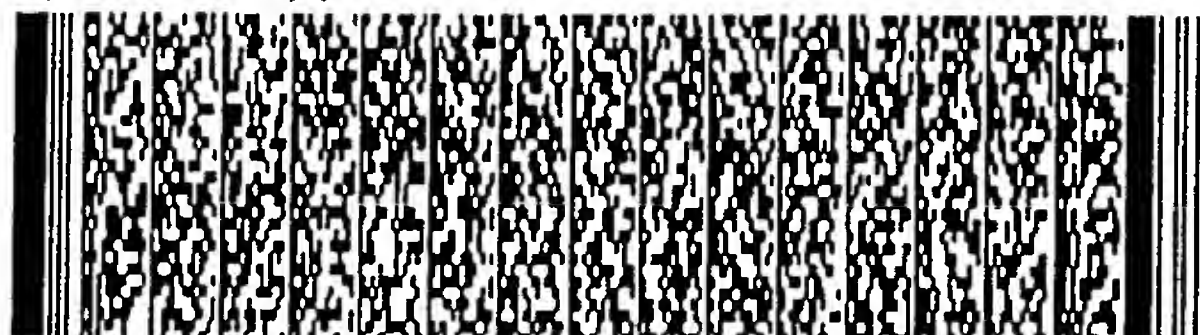
第 5/12 頁



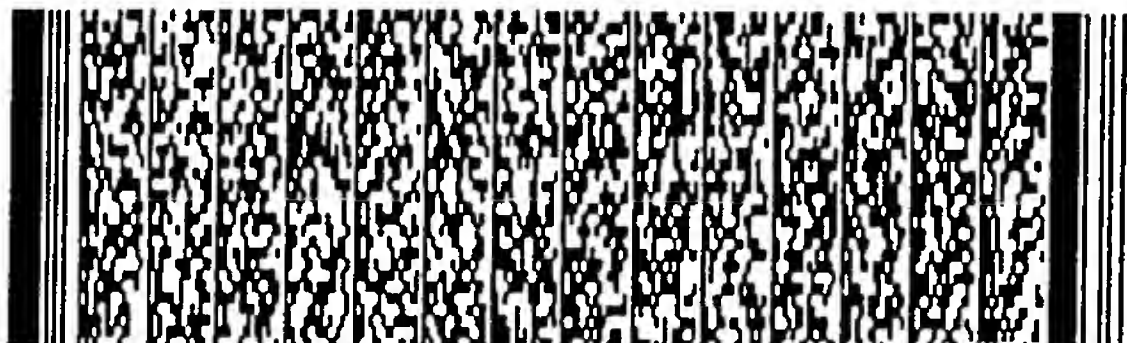
第 6/12 頁



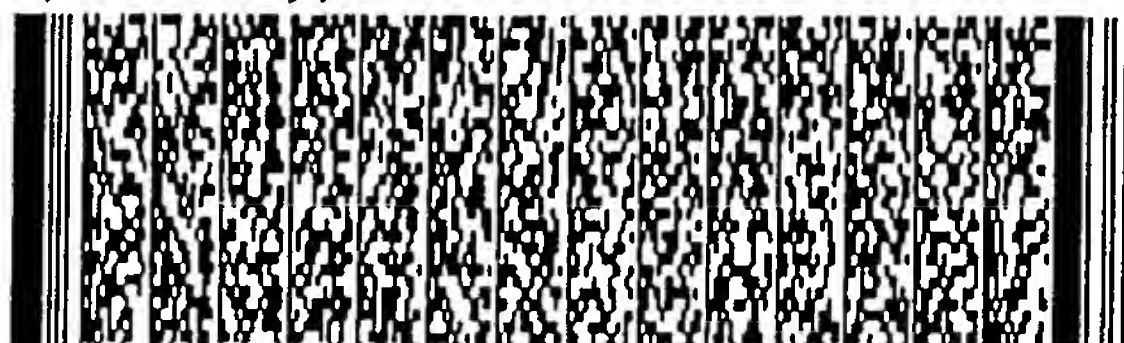
第 6/12 頁



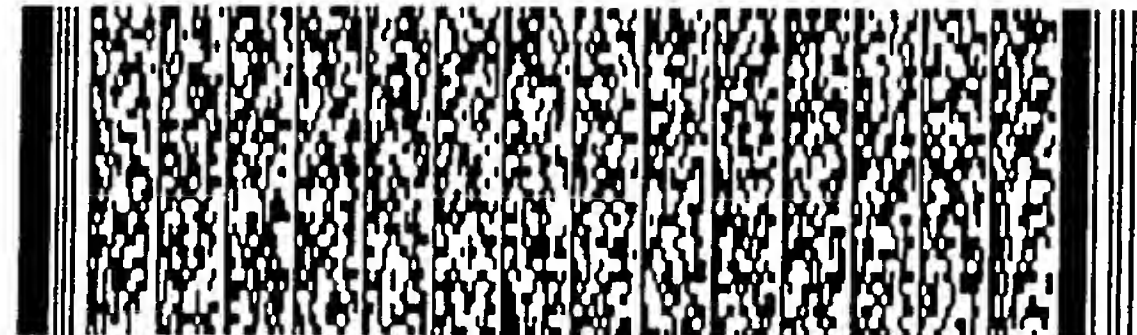
第 7/12 頁



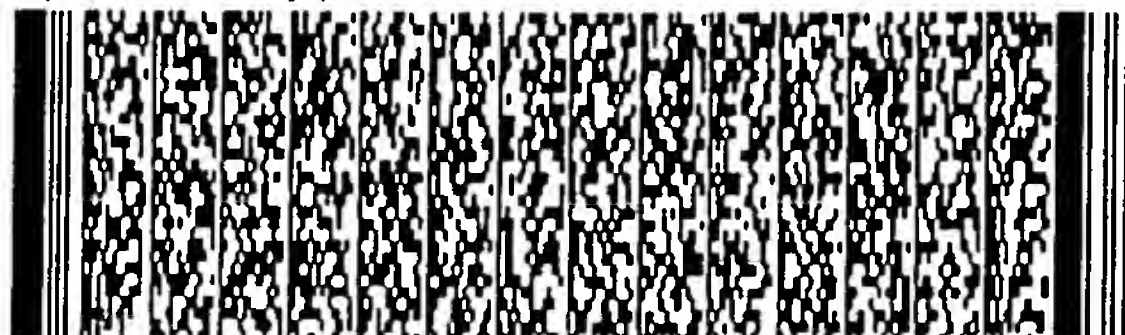
第 7/12 頁



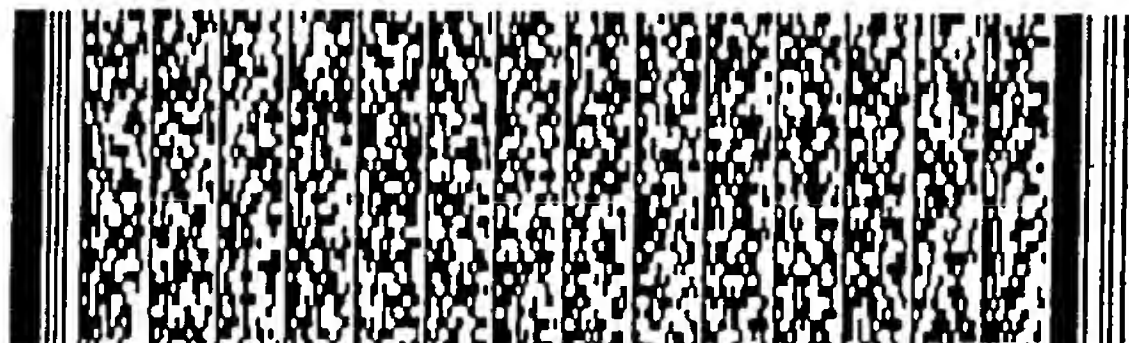
第 8/12 頁



第 8/12 頁



第 9/12 頁



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第 10/12 頁



第 11/12 頁



